

## ABSTRACT

The invention provides a motherboard that uses a high-speed, scalable system bus such as PCI Express<sup>®</sup> to support two or more high bandwidth graphics slots. The lanes from the motherboard chipset may be directly routed to two or more graphics slots. For instance, the chipset may route (1) thirty-two lanes into two x16 graphics slots; (2) twenty-four lanes into one x16 graphics slot and one x8 graphics slot (the x8 slot using the same physical connector as a x16 graphics slot but with only eight active lanes); or (3) sixteen lanes into two x8 graphics slots (again, physically similar to a x16 graphics slot but with only eight active lanes). Alternatively, a switch can convert sixteen lanes coming from the chipset root complex into two x16 links that connect to two x16 graphics slots. The system according to the invention is agnostic to a specific chipset.